

Name _____ Class _____ Date _____

8-5

Practice

Form K

Factoring $x^2 + bx + c$

Factor each completely.

1. $x^2 + 9x + 18$

2. $m^2 + 9m + 14$

3. $x^2 + 5x - 24$

4. $b^2 - 6b - 7$

5. $a^2 - 13a + 22$

6. $w^2 - 7w + 12$

7. $d^2 + 11d + 30$

8. $y^2 - 8y + 15$

9. $x^2 - 16x + 60$

10. $n^2 - 6n - 40$

11. $y^2 + 3y - 54$

12. $z^2 - z - 72$

13. $v^2 - 4vw - 12w^2$

14. $n^2 + 6nm - 16m^2$

15. The area of a rectangular window is given by the trinomial $(x^2 - 14x + 48) \text{ ft}^2$.
If the window's length is $(x - 8)$ feet, what is the window's width?

16. The area of a rectangular area rug is given by the trinomial $(p^2 - 4p - 77) \text{ m}^2$.
If the length of the rug $(p + 7)$ m, what is the width of the rug?

17. Write possible expressions for the length and the width of a rectangle with area $x^2 + 13x + 42$.